

Title (en)
DISCONTINUOUS METHOD FOR PRODUCING POLYAMIDES FROM AMINONITRILES

Title (de)
DISKONTINUIERLICHES VERFAHREN ZUR HERSTELLUNG VON POLYAMIDEN AUS AMINONITRILEN

Title (fr)
PROCEDE DISCONTINU DE PRODUCTION DE POLYAMIDES A PARTIR D'AMINONITRILES

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Application
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Abstract (en)
[origin: DE19804014A1] The invention relates to a discontinuous method for producing a polyamide by reacting a mixture containing at least one aminonitrile and possibly monomers suitable for producing polyamides with water. Said method consists of the following steps: (1) reacting the mixture with water at a temperature of between 90 and 400 DEG C and a pressure of between 0.1 and 35 x 10<6> Pa, resulting in a reaction mixture; (2) further reacting the reaction mixture at a temperature of between 150 and 400 DEG C and a pressure which is lower than the pressure in step (1), whereby the temperature and pressure are selected in such a way that a first gaseous phase and a first liquid phase or a first solid phase or a mixture of the first solid and first liquid phase are obtained, and that the first gaseous phase is separated from the first liquid or first solid phase or from the mixture of the first liquid and first solid phase; and (3) mixing the first liquid or first solid phase or the mixture of the first liquid and first solid phase with a gaseous or liquid phase containing water, at a temperature of between 150 and 370 DEG C and a pressure of between 0.1 and 30 x 10<6> Pa, which yields a product mixture. According to the method step (1) is carried out in the presence of a Bronsted acid catalyst, selected from a beta-zeolite, sheet-silicate or solid-bed catalyst, consisting essentially of TiO₂ with between 70 and 100 weight percent anatase and between 0 and 30 weight percent rutile, in which up to 40 weight percent of the titanium dioxide can be substituted with tungsten oxide, and steps (2) and (3) can be carried out in the presence of said catalyst.

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